

# Sony Broadcast

U-matic

## BVU 200 P/S

U-MATIC EDITING videocassette RECORDER

## BVE 500 ACE

AUTOMATIC EDITING CONTROL UNIT

CAPTURING THE LIVING IMAGE...



# Sony Broadcast Equipment ... Flexibility in System Design

**The BVU-200 P/S U-matic videocassette recorder and BVE-500 ACE Automatic Editing Control Unit are just two component parts of Sony Broadcast's complete, integrated, U-matic system.**

For matchless picture quality, the BVP-300 three tube camera. Automatic operation of iris, white and black balance and beam current optimisation gives the ultimate in picture quality, even under the most arduous conditions. Unique Sony pre-amp FET's give outstanding low-light performance.

And for less critical applications — the BVP-200 two tube camera — 2/3" Saticon for luminance, 1" MF Tricon for chrominance channel. Versatile, easy-to-operate. Lighter weight, lower power consumption than any



BVP-300 three tube camera. BVP-200 two tube camera.  
BVT-500 P/S digital time base corrector. BVU-100 P/S portable U-matic recorder.

previous broadcast quality camera. Like the BVP-300, self-contained — no backpack required.

The BVU-100 P/S Portable U-matic videocassette recorder designed for ENG and reportage applications to complement the BVU-200 P/S editing recorder. Broadcast quality recordings in a highly mobile, easily operated, self-contained 12.2 kg package.

Time Base Corrector BVT-500 P/S. Separate processing of luminance and chrominance signals for the highest quality replay from the BVU-200 P/S. Chroma noise reduction, control of luminance/chrominance delay, differential gain correction and digital drop-out compensation, in colour, are all included in this compact, low cost package. A wider window option is also available.

The BVT-500 P/S will give locked colour pictures at up to twice normal play speed and will transcode between regular and high-band U-matic formats.

**The world's  
finest technology  
at your  
fingertips**

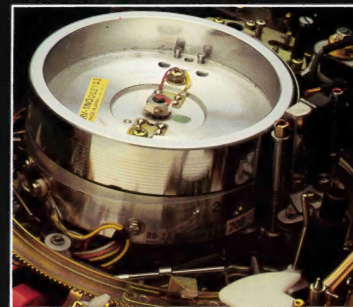
# Sony Broadcast U-matic

## The Preferred Cassette Format

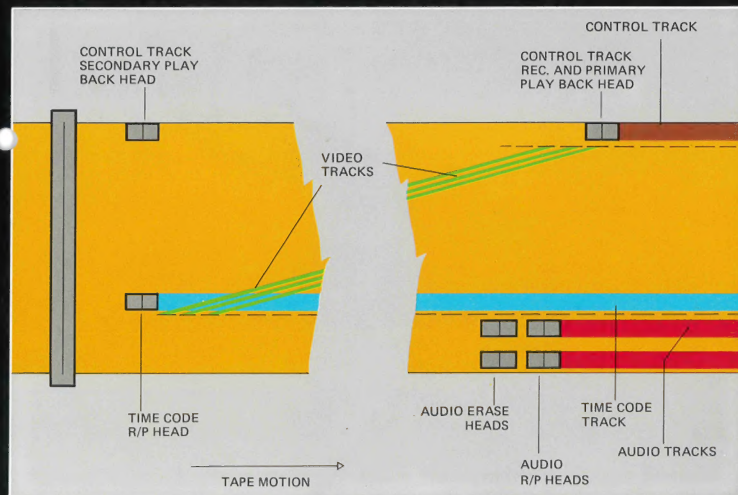
**Sony Broadcast's unique tape format and optimum high band recording parameters combine to give superb picture quality.**

Precision production engineering allows a combination of wide video track and narrow guard band for improved signal/noise characteristics — but still with full tape interchangeability between machines. EB U-matic code track and two discrete audio tracks give maximum operational flexibility.

A high-band U-matic head drum assembly.



The Sony Broadcast U-matic format





# Operational Features

The recorder accepts a composite video l-p-p ( $\pm 6\text{dB}$ ) video signal. BVU-200P machines operate on the 625-line PAL system, BVU-200S machines are for 625-line SECAM operation. Control of video level can be either manual or by an AGC system measuring signal amplitude. Luminance is recorded on an FM sub-carrier, chrominance information is recorded as a 'colour under' signal. The capstan servo system can be locked either to the input signal or to an external sync input. In the absence of either, the servo locks to an internal crystal controlled reference. Indicator lamps show the status of capstan, framing and head drum servos.

An internal dual delay line drop-out compensator operates at both FM sub-carrier frequency and at base-band video. A separate RF output connector is provided for external drop-out compensation.

Input and output dubbing connectors allow the transfer of separate luminance and chrominance signals between machines during dubbing or editing. This avoids repeatedly combining and separating these signals and even third generation tapes can be of broadcast quality with this Sony Broadcast feature.

As a stand alone unit, the BVU-200 P/S can perform insert and assemble edits in video and/or audio, with servos controlling capstan, head drum and framing for smooth disturbance free editing. Combined with the BVE-500 ACE Editing Control Unit, these basic facilities are greatly expanded. The BIDIREX tape control system gives rapid edit point location and editing decisions are implemented by a single operation, enabling a professional end product to be made with a minimum of operator training.

Two discrete programme audio tracks are provided, with input sensitivity switchable between mic. and line level. Recording level is controlled manually and audio limiters may be switched in. A line level output is provided for each audio track, together with a selectable monitoring output and headphone jack.

The BVR 510 ACE control unit provides remote operation of the tape transport functions of the BVU 200 P/S. The Bidirex search facility enables a recording to be monitored from still frame to twice normal play speed in forward or reverse. The unit also provides a pre-roll facility and tape timer.



Sony Broadcast BR series, low drop out Videocassettes are recommended for use with BVU 200 P/S U-matic recorders. KCS Videocassettes are available with play times of 10 and 20 mins. and KCA types with play times of 10, 20, 30 and 60 mins.



BVU-200 P/S tape transport controls are fully interlocked and operating modes may be selected in any sequence.

# BVE 500 ACE

## AUTOMATIC EDITING CONTROL UNIT

The BVE-500 ACE provides complete functional control of two BVU-200 P/S U-matic machines, one operating in playback and one in record mode.

## Operational Features

### Edit Point Search

BIDIREX tape control knobs for both playback and record machines allow tape speed to be varied from still frame to twice normal speed in either direction during edit point search. A locked picture is available at all times for monitoring.

### Tape Counters

Tape counters for playback and record machines count control track pluses and display tape position to within one frame.

### Edit Functions

The BVE-500 ACE permits insert and assemble edits to be made either automatically or manually. Video, audio track 1 and track 2 may be edited separately, or simultaneously in the insert mode.

### Automatic Editing

After edit 'in' and 'out' points have been decided and entered into the BVE-500 ACE's three registers, editing is carried out automatically, with the unit pre-rolling both machines and then initiating video and audio switching. After an edit has been performed, the record machine automatically returns to the edit 'out' point as this is its next 'in' point. Only the playback machine then needs to be searched for the next edit point.

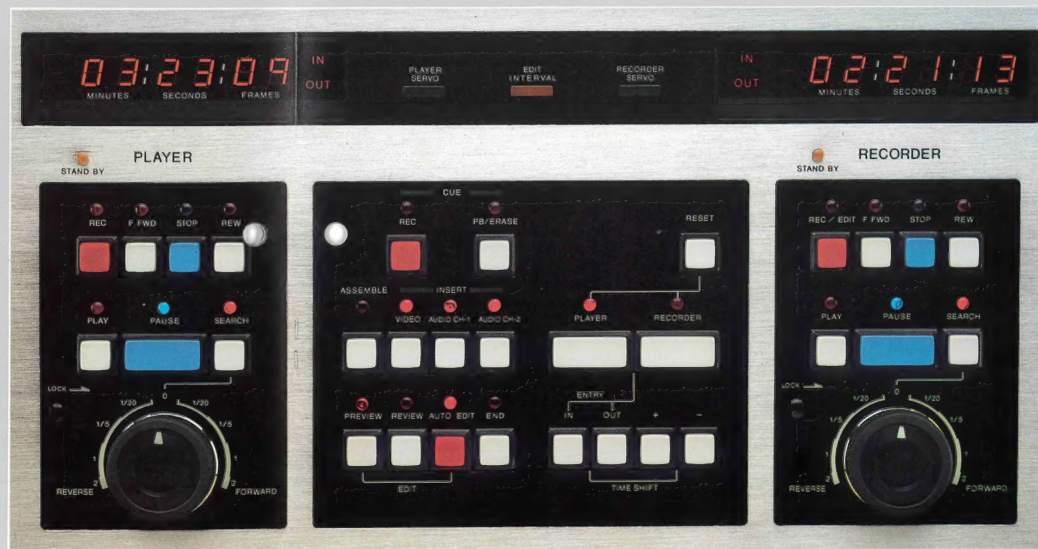
Edits may be rehearsed with a preview facility and the edit point shifted in increments of one frame. After completion, an edit may be checked with the review facility.

### Cue Tone Operation

Optional recording of 1 sec. tone bursts on either of the audio tracks permits automatic tape cueing and can also be used to operate external equipment.

### Functional Indicator Lights

The status of editing functions is shown by indicator lights — generally these are arranged to flash until the required instruction has been entered, then become permanently lit as each command is made.



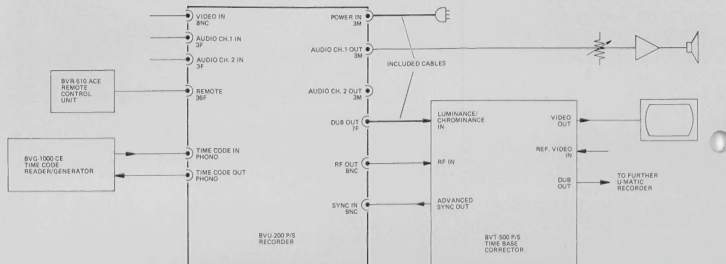
BVE-500 ACE control panel. Centre panel controls provide selection of edit mode and give access to record and playback edit point registers.



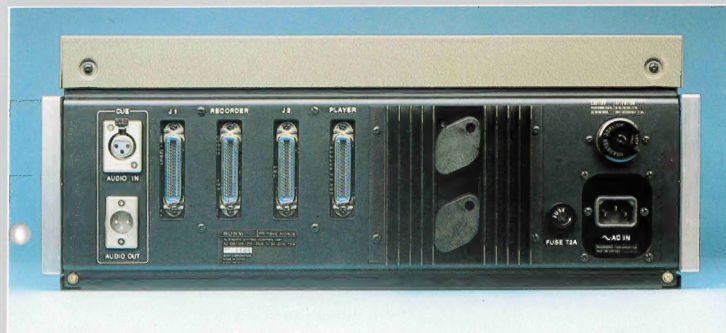
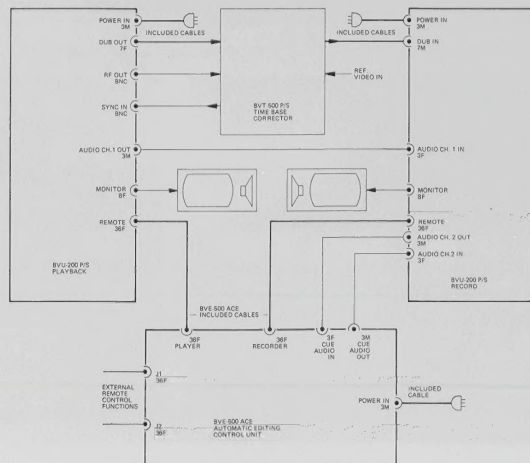
# Connections

## TYPICAL SYSTEM CONFIGURATIONS

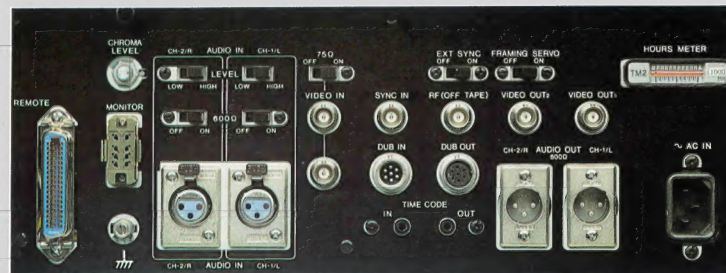
### RECORDING AND REPLAY WITH BVT 500 P/S TIME BASE CORRECTOR



### TAPE TO TAPE EDITING USING RF DUBBING FACILITY THROUGH BVT-500 P/S TIME BASE CORRECTOR



BVE-500 ACE rear connector panel.



BVU-200 P/S rear connector panel.

# Performance Data and Specification

## BUV 200 P/S

### VIDEO

#### Recording System

2 head helical scan, tape speed 9.53 cm/sec (3.75 in/sec)  
Luminance: FM (4.8-6.4 MHz)  
Chrominance: converted SC  
BVU 200P (PAL) 923-803 kHz  
BVU 200S (SECAM) D<sup>+</sup> 837-891 kHz  
D<sup>+</sup> 994-141 kHz

#### Video input

Composite video, 1.0V p-p,  $\pm 6\text{dB}$ , 75 ohms

#### Video outputs

Composite video, 1.0V p-p,  $\pm 0.2\text{V}$ , 75 ohms

#### Ext. sync input

2V p-p, negative, or 1V comp video, 75 ohms

#### RF output (off tape)

0.5V p-p, 75 ohms

#### SC input

1V p-p, 75 ohms

#### Dubbing input

Luminance, 0.5V p-p, 75 ohms

Chrominance, 0.5V p-p, 75 ohms

#### Dubbing output

Luminance, 0.5V p-p, 75 ohms

Chrominance, 0.5V p-p, 75 ohms

#### Resolution

Monochrome: 370 lines

Colour: 200 lines

#### Signal-to-noise ratio

46dB (colour)

### AUDIO

#### Frequency response

50 - 15,000 Hz

#### Signal-to-noise ratio

48dB (at 3% dist)

#### Distortion

Less than 2.5%

#### Wow and flutter

0.2% rms

#### Inputs

Mic level:  $-60\text{dBu}$ , 3K ohms, balanced.

Line level:  $+40\text{dBu}$ , 600/10K ohms, balanced.

$+40\text{dBu}$ , balanced, into 600 ohm load

$-20\text{dBu}$ , 8 ohms

#### Line outputs

#### Headphone output

### TIME CODE

#### Input

0dBu, 10K ohms, unbalanced

#### Output

0dBu, low impedance, unbalanced

### ELECTRICAL

#### Power requirements

100/120/220/240V  $\pm 10\%$ , 48-64 Hz

#### Power consumption

190W max

### GENERAL

#### Operating temperature

5°C to 40°C

#### Recording time

60 mins max

#### Fast forward time

Less than 5.2 mins with 60 min videocassette

#### Rewind time

Less than 3.6 mins with 60 min videocassette

#### Recommended videocassettes

Sony Broadcast KCA or KCS BR series

### ACCESSORIES

#### Included

Power cable

Dubbing cable VDC 3

Operation and maintenance manual

Remote control unit BVR-510 ACE

Spare parts kits

Type A RKU-200 PS-A

Type B RKU-200 PS-B

Type C RKU-200 PS-C

Combined BVU-200 and BVU-100

alignment kit.

#### Optional

## BVE 500 ACE

### Cue tone frequency

1kHz from internal generator

### Digital tape time counter capacity

-79 min 59 sec 24 frames, through 00.00.00 to +79 min 59 sec 24 frames.

$\pm 2$  frames

### Editing accuracy

### Operating temperature

5°C to 40°C

### Power requirements

100/120/220/240V  $\pm 10\%$ , 50/60 Hz

### Power consumption

70W

### BIDIREX tape speed selection

$\times 2$ ,  $\times 1$ ,  $\times 1/5$ ,  $\times 1/20$  of normal speed

in forward and reverse.

TTL logic levels

### External interface

### ACCESSORIES

#### Included

Power cable

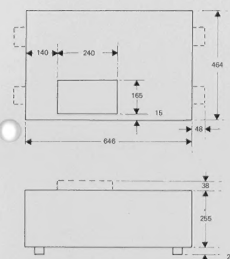
Two 5m remote control cables

Operation and maintenance manual

#### Optional

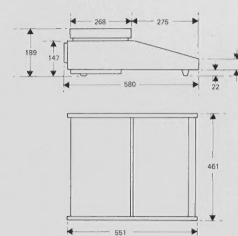
Rack mounting kit

## BUV 200 P/S



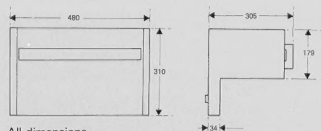
WEIGHT: 46 kg

## BVE 500 ACE



WEIGHT: 16.5 kg

### INSTALLATION WITH OPTIONAL RACK MOUNTING KIT



All dimensions are in mm

# Sony Broadcast



## CAPTURING THE LIVING IMAGE...



**Sony Broadcast Ltd.**

City Wall House  
Basing View, Basingstoke  
Hampshire RG21 2LA  
United Kingdom

Telephone 0256 55011  
Telex 85 84 24